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SECTOR 5 — CHART INFORMATION

SECTOR 5

EAST COAST OF NEWFOUNDLAND—CAPE RACE TO CAPE ST. FRANCIS

Plan.—This sector describes the E coast of Newfoundland from Cape Race N to Cape St. Francis (47°48'N., 52°48'W.).

General Remarks

5.1 Winds—Weather.—On the Grand Banks, during the winter months, the W winds have a mean force of Beaufort Scale 5. West to NW winds are the strongest. East winds average Force 4, with NE and SSE winds being the strongest.

The mean annual percentage of gales on the Grand Banks is 5 or 6 per cent, with a maximum of 10 to 16 per cent in winter, and a minimum of 1 per cent in late spring and summer. Occasionally, gales of Force 9 or 10 occur during summer and may be attributed to tropical cyclones which have progressed to higher latitudes.

The Grand Banks area is one of the largest and most persistently foggy areas of the world. Sea fogs are most common during May, June, and July, because warm, moist SW winds from the Gulf Stream prevail during that period. The cooling of this air by the cold waters of the Labrador Current produces dense sea fog on the Grand Banks.

On the E coast of Newfoundland, fog is brought in by NE and E winds during May, June, and July. The fog rarely extends far inland in summer and in sheltered, landlocked harbors, there is usually much less fog than at sea. At Cape Race, the average number of days with fog from May to July is 51, while in St. John's Harbor it is only 15.

When fog is generally over the open sea, and the wind is off-shore, there may be either a gap between the shore and the fog, or the fog may be thinner; the more hilly the land, the more marked will be the improvement in visibility. During late spring and summer, there is often an improvement in the visibility close leeward of the land during late morning and afternoon when the land is its warmest. During SW and light SE winds, it often happens that when approaching the coast, especially in the lee of a point, a vessel will seem to suddenly emerge from the fog and the coastal features then become distinctive.

The Labrador Current widens as it sets S at a rate of less than 1 knot off the E coast of Newfoundland, passing over the whole of the Grand Banks in all seasons, except the Tail of the Bank in July.

A major branch of the Labrador Current continues S down the E edge of the Grand Banks, carrying ice into the trans-Atlantic shipping lanes. A berg was observed in April drifting down the E edge of the Grand Banks at a rate of 1.5 knots. Another branch follows the coast of the Avalon Peninsula and rounds Cape Race. From here, the set is primarily SW at a rate of less than 1 knot, but often varies subject to the influence of the wind and tide.

The line of convergence of the Gulf Stream and the Labrador Current, known as the Cold Wall is most sharply defined at the Tail of the Bank; here the two currents present a remarkable contrast. The waters of the Labrador Current are olive green,

and those of the Gulf Stream are indigo blue. A temperature change from 40°C to 0°C has been recorded here in less than a ship's length. Along the convergence, water from the Labrador Current recurves E to flow parallel to the N edge of the Gulf Stream, gradually losing its identity through mixing processes.

The Labrador Current sets SW off this section of the coast with a greatest observed velocity of 1.1 knots. It is not unusual for this current to be so disturbed as to set across its ordinary direction, or even to be reversed on the surface. When such disturbance occurs, it is usually for a short time immediately preceding a gale. The velocity fluctuates with the tidal currents; during the flood current it decreases. Close inshore, the flood current sets SW and the ebb current sets NE.

On Bantam Banks, the current is reported to set S or SSW in good weather. It is strong during the flood, but may set weakly in the reverse direction during the ebb. On Ballard Bank, the current is similar, but the tidal currents have less influence. On either of these banks, any decided reversal of the usual set of the current is a sign that foul weather is approaching, and this is known to have occurred previous to a NE wind. After the NE wind begins, the current again sets SW.

When the current sets strongly SW along the coast between Cape St. Francis and Cape Race, a strong countercurrent sets N as far as 1 mile offshore, SW of Cape Spear.

North of Cape Spear, the flood current is NE and retards the Labrador Current which is usually SW; the ebb current sets SW and accelerates the Labrador Current.

Ice.—Along the E edge of the Grand Banks, icebergs are usually sighted late in February or early in March, and the season lasts until the middle of July. May is the most dangerous month for shipping. Bergs are at a minimum during November, December, and January. The Labrador Current carries the bergs from the Arctic to the Tail of the Bank, then their drift depends on the complex and variable currents along the convergence of the Labrador and Atlantic currents. Between 42°N and 45°N, and 47°W and 52°W, the Gulf Stream and the Labrador Current converge and the movement of ice is influenced sometimes by these currents.

Hundreds of bergs ground on the N part of the Grand Banks and disintegrate. Ultimately, the majority of the remaining bergs reach the N edge of the Gulf Stream, which carries them E or NE where they enter the final stage of disintegration. Occasionally, during a bad ice year, a berg is borne S by the eddies of the Gulf Stream and in exceptional cases have been reported as far S as the latitude of Bermuda.

During the months of July through December, the Grand Banks are entirely free of pack ice. The pack ice carried S in the Labrador Current usually reaches the Grand Banks in January. On the average, pack ice extends farthest S in March and April, down the E edge of the bank. Although the pack tends to scatter in the open Atlantic, the ice retains considerable strength, and navigation on the Grand Banks may be impeded as far S as 45°N. South of this latitude, the pack begins to break up and it is mostly destroyed before reaching the

Tail of the Bank, around which it seldom works W. In extremely unfavorable ice seasons, dangerous floes extend to the Tail of the Bank and even S of it.

When approaching the coast of Newfoundland from the E, upon encountering ice, the vessel should evade the ice to the S, working W only as open water is found. Vessels should be wary of blind leads and keep well off the ice at night and in poor visibility. There is usually an open lead between the E coast of Newfoundland and the ice, extending at least as far as St. John's except during periods of E or SE winds when the coast is unapproachable. The mariner is warned that such shore leads can close very rapidly with a shift in wind.

Northern ice arrives late in February and leaves early in April. In February and March of an average year, the E coast of the Avalon Peninsula is sometimes blocked for long periods by close-packed ice, forming an impenetrable barrier, pressed tightly against the shore by a continuance of E winds. In April, the ice is navigable by ordinary vessels and there are large areas of open water. Except during periods of E or SE winds, when the coast is unapproachable, there is usually an open lead between the E coast of the Avalon Peninsula and the ice, extending N at least as far as St. John's.

Ferryland Harbor freezes at intervals, generally during the first 10 days of February, sometimes freezing for only a day. The ice, however, never forms during strong NW winds. Winds from between the WSW and S break up the ice and clear the harbor. Drift ice sometimes remains as late as the end of June. Northeast winds fill the harbor with drift ice which clears out when the wind shifts SW. Northern ice arrives late in February and dissolves early in April.

The harbors of Renewes, Fermeuse, Aquaforte, Broyle, and Bay Bulls, fill with ice and clear about the same time as Ferryland Harbor.

Pilotage.—Pilotage for ports in this sector is obtained through the Atlantic Pilotage Authority. [See Pub. 140, Sailing Directions \(Planning Guide\) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea](#) for further information.

Caution.—Users of the Loran-C Labrador Sea chain secondary signals from Angissoq, Greenland have reported positional errors of up to 10 miles due in large part to skywave interference. Skywave interference is likely to be encountered anywhere off the E and NE coasts of Newfoundland, particularly in areas S of the parallel of 50°N. Receivers being tuned to a correct reading have been evaluated as likely to continue to maintain accurate readings.

The Grand Banks

5.2 The Grand Banks (Great Bank of Newfoundland) as defined by the 183m curve, extend as far as 230 miles E of Cape Race, Newfoundland, and about 350 miles N from the Tail of the Bank 42°52'N, to 48°40.1'N. The W limit is formed by Saint Pierre Bank which gives the Grand Banks a maximum width in an E-W direction of about 411 miles. The Grand Banks consist of a submarine plateau rising abruptly from ocean depths to general depths of less than 92m. The central part is quite even, but a number of isolated soundings, shallower than the surrounding depths, exist between the central part of the banks and the 2,000m curve. The chart should be studied with care and such isolated soundings should always be

avoided as there is no knowing how closely the spot may have been examined.

Green Banks lie S of the Avalon Peninsula and are a part of the Grand Banks. The general depths are irregular from 55 to 92m. This bank has a least depth of 18m, over a wreck, in position 45°46'N, 54°19'W.

Saint Pierre Bank, the W edge of the Grand Banks, is separated from Green Banks by a deep channel and has general depths of 37 to 92m.

Burgeo Bank, a detached bank with a least depth of 50m, lies about 23 miles NW of Saint Pierre Bank.

Caution.—Vessels traversing the Grand Banks should bear in mind that **Virgin Rocks** (46°25'N., 50°49'W.), with a least depth of 4.3m, and **Eastern Shoals** (46°27'N., 50°28'W.), which lies about 13.5 miles E of Virgin Rocks and has a least depth of 14.3m, are the only dangers whose exact positions have been verified. Isolated soundings, shallower than the surrounding depths, should be avoided as there is no knowing how closely the spot may have been examined. Depths of 28m or less on the Grand Banks should always be regarded as dangerous to navigation, especially by deep-draft vessels, and should not be approached by vessels without taking special precautions. In heavy weather, the sea is reported to break over the patches with depths of 24m or less.

A depth of 26m is charted about 1.5 miles SE of Virgin Rocks in position 46°28'N, 50°46'W.

Flemish Cap is a detached bank lying about 90 miles E of the Grand Banks, from which it is separated by the relatively deep Flemish Pass. There is a least depth of 126m on the Flemish Cap.

Mariners are advised that large concentrations of fishing vessels may be encountered anywhere on the Grand Banks, especially during the periods and in the areas indicated:

1. From April to December, in areas bounded by 43°N and 48°N, and longitudes 49°W and 55°W.
2. From December to April, in areas N of 48°N, N to the S limits of ice, and extending E from the coast to about 48°W.
3. During the period July to October, large concentrations of small fishing vessels may be found in the vicinity of Virgin Rocks.

Vessels proceeding through areas of the Grand Banks are advised to navigate with extreme caution in order to avoid vessels engaged in fishing.

The Grand Banks—Offshore Oil Structures

5.3 The **Hibernia Gravity Based Structure** (46°45'N., 48°47'W.) is now permanently installed. Two Offshore Loading System Bases are being installed about 1 mile E and ESE, respectively, of the Gravity Based Structure. All vessels not engaged in operations within these facilities should remain clear of this area and navigate with caution in this vicinity.

The **Terra Nova Floating Production Storage and Offloading Vessel (FPSO)** (46°28'31.8"N., 48°28'51.6"W.) is located about 20 miles SE of the Hibernia Gravity Based Structure. Three traffic control zones, subject to Canadian law, have been established to protect the FPSO vessel, the Mobile Offshore Drilling Units (MODU), and any surface and sub-surface installations associated with the Terra Nova field from



Cape Race

collisions with other vessels. Vessels approaching the area must contact the Terra Nova FPSO or MODU on either VHF channel 16 or GMDSS. The three traffic control zones are, as follows:

1. **Zone 1.**—A Precautionary Zone, with a radius of 10 miles, centered on the above position of the FPSO. Prior to entering the Precautionary Zone, vessels must advise the FPSO or MODU of their position, course, and intention to pass through the area. Vessels are not permitted to approach within 5 miles of the FPSO or MODU, except as described in Zone 2 and Zone 3 below.

2. **Zone 2.**—A Safety Zone, with a radius of 5 miles, centered on the above position of the FPSO. Vessels wishing to enter the Safety Zone, including Terra Nova support vessels and fishing vessels, must obtain permission from the FPSO or MODU. At the termination of the visit, vessels must advise the FPSO or MODU when clear of the Safety Zone. Vessels are not permitted to approach within 3 miles of the FPSO or MODU, except for Terra Nova support vessels or fishing vessels operating with FPSO approval.

3. **Zone 3.**—A Fisheries Exclusion Zone, bound by lines joining points lying 500m from the four active Terra Nova drilling centers, as follows:

- a. 46°29'39.0"N, 48°29'30.0"W.
- b. 46°29'33.0"N, 48°27'17.4"W.
- c. 46°27'30.6"N, 48°30'12.0"W.
- d. 46°27'06.0"N, 48°27'24.6"W.

Fishing vessels are prohibited from fishing in or passing through the Fisheries Exclusion Zone at any time or within 50m of the MODU anchor pattern.

Precautionary Area in the Region of the Grand Banks of Newfoundland.—In order to reduce the risk of a marine casualty and resulting pollution and damage to the environment, all ships not involved in the oil-related activities being conducted

within the area, should navigate with particular caution in the area having a 10-mile radius centered on position 46°28.53'N, 48°28.86'W. Ship movement in the area is monitored on a 24-hour basis. Any ship planning to transit the pre-cautionary area is advised to contact the Terra Nova FPSO on VHF channel 16 and to comply with the instructions given while transiting the area.

Cape Race to St. John's Harbor

5.4 Cape Race (46°39'N., 53°04'W.) is the SE end of Newfoundland. It has a barren appearance and is faced with cliffs, 30 to 46m high, formed of slate in nearly vertical strata. The land rises gradually, and from 10 to 12 miles to the N are the Red Hills, a rocky range about 213m in elevation. A detached wedge-shaped rock, 10m high, lies close to the SE extremity of the cape. A wreck, with a depth of 10.9m, lies sunk about 0.7 mile NE of Cape Race.

Lighted Bell Buoy MCR2 is moored about 1 mile S of Cape Race.

Caution.—Vessels approaching Cape Race should sound frequently and compare the soundings with the chart.



Cape Race bearing 217°, distant 5 miles

Ballard Bank (46°41'N., 52°51'W.) is situated about 8 miles E of Cape Race. It is about 11 miles long and runs almost parallel to the coast. The least depth is on the N part over Tommy Rock at a depth of 14.9m. Pig Bank, with a least depth of 25.3m, lies about 4.5 miles S of Cape Race



Cape Race

Ice.—Ice may be seen off Cape Race from March to July. Field ice is often encountered, with the earliest recorded arrival of northern ice at Cape Race being mid January and the latest, mid April.

5.5 Chance Cove (46°46'N., 53°01'W.) is a small open bight about 1 mile W of Chance Cove Head. The cove affords anchorage to small vessels during NE winds, in 7.3m, sand. Black Rocks, 6m high, lie in the entrance of the cove, about 0.5 mile offshore.

Chance Cove Head, to the N of Chance Cove, has dark slate cliffs 46m high. A tower, mared by red lights, is situated about 8 miles W of Chance Cove Head.

Cape Ballard (46°47'N., 52°57'W.) lies E of Chance Cove. The cape rises abruptly to an elevation of 91m. It has a bare, round summit. The land falls away on either side of the cape.

Renews Island (46°56'N., 52°55'W.) is low and rocky. It is separated from the coast by a narrow boat channel.

Renews Rocks (46°52'N., 52°54'W.), a group of rocks 1.8 to 3m high, lie about 1.5 miles offshore and 2 miles SSE of Renew Head.

Renews Harbor is entered between Sculpin Point and Renew Head. The harbor is used by small boats. It affords only mediocre anchorage, as in heavy weather the entire harbor is a mass of breakers. Approach is best made along the south shore of the harbor, due to the numerous rocks and shoals extending to 0.25 mile S of Northern Head.

The community of Renew is situated on the NE side of the harbor. There is a public wharf toward the NE in the vicinity of Anchor Rock. Several small wharves and a slipway used by local boats are located at the NW end of the harbor. Entrance to the area is through a buoyed channel.

5.6 Bear Cove Point (46°56'N., 52°53'W.) is a conspicuous feature. A rock, with a least depth of 3.7m, lies about 0.2 mile SE of the point. Sunker Rock, with a depth of 1.2m, lies about 0.2 mile SSW of the S extremity of the same headland. A light is shown from the point.

Fermeuse Harbor is entered between Bear Cove Point and Northern Head, about 1.5 mile NNW. The tidal currents set

into Fermeuse Harbor on the flood and out on the ebb; the maximum velocity is about 0.5 knot. The safest anchorage for small vessels is in 10.9m, NW of Sheeps Head, near the head of the harbor. Blow-Me-Down Head, about 1.3 miles WNW of Bear Cove Head, bearing 285° and open N of Traces Point, a little more than 0.5 mile NW of Bear Cove Head, leads N of Mad Rock, which lies about 0.5 mile NW of Bear Cove Head.

The community of Port Kirwan is situated on the shores of a small cove on the north shore of the harbor, about 0.6 mile WNW of Northern Head. The cove provides anchorage for small vessels. A church with a spire stands in the settlement. An L-shaped public wharf extends 44m from the shore to an outer end of 50m long. Fresh water is available. Depths alongside the outer section range from 5.2 to 9.9m. A slipway is located on the W side of the public wharf.



Port Kirwan

The community of Fermeuse is located at the head of Fermeuse Harbor. A church with a spire stands in the community. A visible wreck lies about 0.5 mile SW of the public wharf at Port Kirwan.

5.7 Bald Head (46°58'N., 52°54'W.) is a conspicuous headland. Aquaforte Rocks, awash at low tide, lie about 0.2 mile N of Bald Head. Clear Cove Rock, 1m high, lies close S of the head.

Aquaforte Harbor is entered between **South Head** (47°00'N., 52°54'W.) and North Head, about 0.4 mile N. Spurwink Island 20m high and steep-to, lies close N of South Head.

The tidal currents set in on the flood and out on the ebb, at a maximum velocity of about 0.5 knot.

Anchorage.—Little sea or swell finds its way up the harbor except during heavy E gales. Anchorage in Aquaforte Harbor is good; vessels lie safely, in 16.4m, mud, abreast the E of two chapels, standing about 2.5 miles W of North Head. From a position on the coastal track abreast Aquaforte Harbor, vessels make directly for the entrance.

5.8 Ferryland Head (47°01'N., 52°52'W.), 44m high, is connected with the mainland by a narrow isthmus. A light is shown from the SE extremity of the head.

Hares Ears are two conspicuous 27m rocks lying close E of the SE extremity of Ferryland Head.

Ferryland Harbor is entered between the N Side of Ferryland Head and Bois Island, about 0.1 mile N. The Episcopalian and Roman Catholic Churches, which are conspicuous, stand about 0.4 mile and 0.6 mile SSW, respectively, of **Coldeast Point** (47°02'N., 52°53'W.).

The best anchorage, in 18.3m, mud and sand, is near the head of the harbor. The holding ground is good except in strong E gales, when a considerable swell enters at HW across the reefs on the NE side. The harbor is easy to access. From a position on the coastal track abreast the harbor, vessels make directly for the entrance.



Ferryland Light



Ferryland Light

Calvert Bay is entered between Coldeast Point and the S extremity of Cape Broyle, about 1 mile NE. The holding ground is good, but it is exposed SE and is recommended only for temporary anchorage. Hares Ears, bearing 155° and open NE of **Bois Island** (47°02'N., 52°52'W.), leads NE of the dangers off Coldeast Point and SW of **Goose Island** (47°02'N., 52°52'W.).

5.9 Cape Broyle (47°04'N., 52°51'W.) is a conspicuous wooded headland.

Directions.—Ferryland Roman Catholic Church, bearing 220° and open SE of the **Stone Islands** (47°03'N., 52°52'W.), leads SE of **Old Harry** (47°04'N., 52°51'W.).



Icebergs off Cape Broyle



Cape Broyle from E



Cape Broyle from SSE



Cape Broyle over Ferryland Head

Cape Broyle Harbor is entered between **North Point** (47°04'N., 52°51'W.) and Brigus Head, about 1.8 miles NNW. The tidal currents set into the harbor on the flood, and out on the ebb; the maximum velocity is about 0.5 knot.

Ice.—Ice from the N arrives late in February and leaves early in April. Cape Broyle Harbor is open E and affords anchorage only in good weather.

Depths—Limitations.—An L-shaped public wharf on the N shore has an outer end, 25m long, and a depth of 4.6m alongside.

Anchorage.—Anchorage may be obtained about 0.2 mile W of Carrier Point, 2.25 miles W of Brigus Head, in 12.8m, mud. In good weather anchorage may be obtained in Admirals Cove, 1.5 miles W of Brigus Head, in 20.1m, mud, but this anchorage is more exposed than that W of Carrier Point.

Directions.—From a position on the coastal track abreast the inlet, vessels make directly for the entrance. Carrier Point, in

line bearing 276° with a rocky hill at the head of the inlet, leads very close S of Saturday Ledge, 1.75 miles W of Brigus Head.

5.10 Brigus Head is a headland, 85m high. A church, visible from seaward, stands on the shore at Brigus, which is a boat harbor lying on the N side of Brigus Head.

Offer Rock, with a depth of 13.7m, lies almost 2.5 miles NNE of Brigus Head.

Cape Neddick (47°09'N., 52°51'W.), 3.25 miles N of Brigus Head, is a bluff headland rising to an elevation of 81m.

Great Island (47°11'N., 52°49'W.), bare and 86m high, lying 1.75 miles NNE of Cape Neddick, has cliffs composed of slate, giving a remarkable glare when exposed to sunlight.

Ship Island (Spear Island), 23m high, lies just over 0.5 mile NW of Great Island. Pee Pee Island, 22m high, is located about 0.2 mile S of Ship Island.

Fox Island, 53m high, lies 0.5 mile NNW of Ship Island.

Tors Cove (47°13'N., 52°51'W.) is a fishing station; it is too open to be safe, except during the summer in good weather.

Tinker Point (47°14'N., 52°50'W.) lies 0.9 mile NNE of Fox Island.

Mobile Bay lies close SW of **Witless Point** (47°15'N., 52°48'W.) but does not afford good anchorage. A conspicuous standpipe, about 69m high, stands at an elevation of 129m, about 0.3 mile SW of the head of Mobile Bay.

The channel between the shoals extending from Witless Point and Green Island, 0.5 mile ESE, has a depth of 9.1m. Vessels using this channel should steer in mid-channel with **South Head** (47°17'N., 52°45'W.) in line bearing 020° with the W extremity of **Gull Island** (47°15'N., 52°46'W.).

Witless Bay is entered between Witless Point and South Head, about 3 miles NNE. Gull Island, heavily wooded and 74m high, lies in the entrance to the bay. Both South Head and Gull Island have red cliffs. Witless Bay is exposed and anchorage is not recommended. Temporary anchorage may be obtained, in 14.6m, sand, about 0.5 mile WSW of Bear Cove Point, which lies 1.75 miles WSW of South Head.



Iceberg in Witless Bay

5.11 Bay Bulls is entered between South Head and Columbine Point, about 1.25 miles NE. The bay is exposed E, but there is some shelter in the W part which bends N. After heavy E gales, a ground swell enters the bay but does not endanger shipping.

Ice.—Ice from N arrives late in February and leaves early in April. Bay Bulls is often clear of ice when St. John's Harbor is filled with it.

Tides—Currents.—Tide Spring tides rise 1.5m; neap tides rise 0.9m.

Depths—Limitations.—An L-shaped wharf, on the W side of the bay, has a berthing length of 52m and an alongside depth of 6.4m.

Anchorage.—Sheltered anchorage, good holding ground, can be obtained near the head of the bay, in 14.6 to 22.0m, mud and sand. The bay is open E, and after E gales a ground swell enters but it is not sufficient to endanger shipping. The head of the bay is protected by a slight bend to the NW of the inner part.

In order to avoid fouling submerged rails of a slipway, anchorage is prohibited within a distance of 120m of the head of East Pier.

Directions.—From a position on the coastal track abreast Bay Bulls, vessels may make directly for the entrance of the bay. After passing Bread and Cheese Rock, vessels should favor the N side of the bay and anchor as convenient. The N side is always better sheltered from the ground swell.

The Spout (47°22'N., 52°43'W.) is a phenomenon caused by the sea being forced through a fissure in the rocks from an underwater cavern and emerging with a loud roaring noise, accompanied by jets of foam. It is conspicuous at HW during a swell and may be distinctly seen from a distance of 3 miles off-shore.

Motion Bay is entered between Motion Head and Noth Head, about 3 miles NNE.

5.12 Motion Head (47°26'N., 52°40'W.) is 21.6m high and rises close within to 46m. Several large boulders are scattered about on the rugged barren land in its vicinity. A conspicuous rock lies close inshore on the S side of Motion Head.

Tinker Hill, 65m high, rises about 0.5 mile SW of Motion Head and is conspicuous. The coast is low in the vicinity of Seal Cove. There are few cliffs but the land is backed by hills.

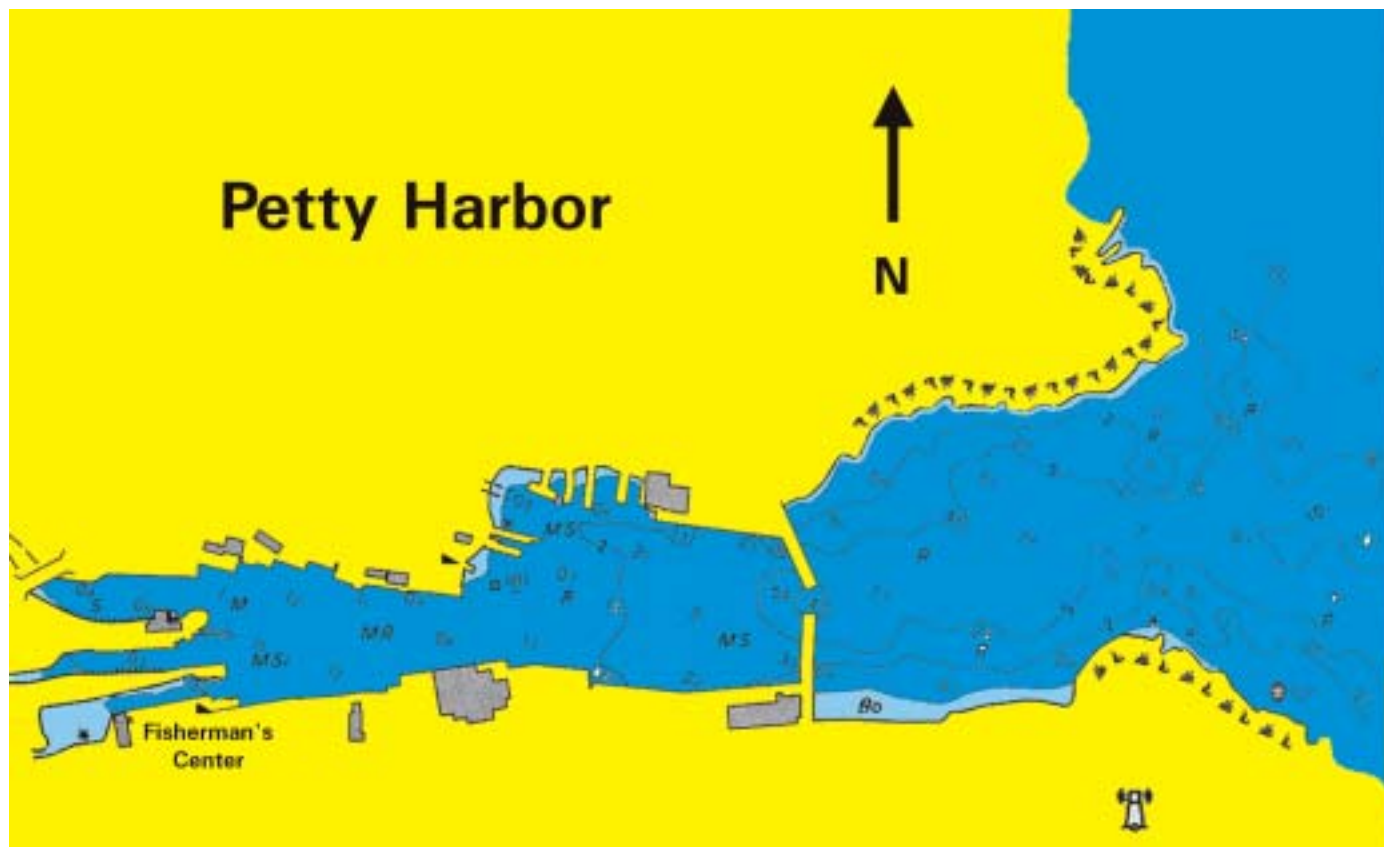
Watch Hill, 215m high, rises about 1.8 miles W of Motion Head and is conical in shape, with a large boulder on its summit. Horseshoe Cliff, about 2 miles NW of Motion Head, is shaped like a horseshoe. North Head is a rugged headland; an isolated rock, 4.5m high, lies close off this head and is conspicuous from seaward.

Within Motion Bay is Petty Harbor. A narrow gully, it has depths from 5.5 to 11m for approximately 0.2 miles within its entrance. The fishing settlement of Petty Harbor stands on its shores. Good anchorage can be obtained off the entrance to Petty Harbor, off Maddox Cove, about 2.8 miles NW of Motion Head, in a depth of about 22m. There is a government jetty in the harbor 37m long and 6m wide, with a depth alongside of 3m.

Maddox Cove forms the head of Motion Bay and is the site of a small settlement where there are some small wharves.

North Head (47°29'N., 52°38'W.) is a rugged headland, 65m high, fringed with shoals having a least depth of 8.5 m over them. An isolated rock close off the headland is 5m high and prominent from seaward.

Between North Head and **Cape Spear** (47°32'N., 52°37'W.), about 2.5 miles NNE, the coast attains an elevation of 98m in a



Petty Harbor

position marked by a small stone cairn, about 1 mile N of North Head.

An aeronautical light is shown from St. John's airfield in position 47°37'N, 52°44'W; because of the hills in the area, normally only the loom of the light is visible from seaward.



Approach to St. John's—Cape Spear

Courtesy of USCGC Healy

5.13 Approaches to St. John's Harbor.—When approaching St. John's Harbor from the E, the bottom is uneven, resulting in irregular depths. Approaching from the S or SE, Cape Spear can be sighted rising steeply to an elevation of 80m, 3.7 miles SE of Cuckold Head. There is a light on the E side of Cape Spear, at an elevation of 71m, shown from a white octagonal tower, 10.7m high. An old light structure stands about 0.1 mile SW of the light.

Tinker Rock, with a depth of 8.8m, lies about 0.3 mile SE of Cape Spear. Old Harry, a rock with a depth of 8.5m lies about 0.4 mile NE of the cape. Old Haman Rock, about 0.5 mile N of Cape Spear, has 10.7m of water over it.

St. John's Bay lies between Cape Spear and South Head, the entrance to St. John's Harbor, 3.3 miles NW. The bay is indented by several small coves on its S side.

Black Head (47°32'N., 52°39'W.) is a bold headland, 127m high, marked by a cairn, about 1 mile WNW of Cape Spear. The headland slopes gradually down to Cape Bay on the E side and to Blackhead Bay on the W side. A church stands at the head of Blackhead Bay, close W of Black Head.

Cliff Point, the W entrance point of Blackhead Bay, shows a square face of cliff to seaward.

Spriggs Point (47°33'N., 52°40'W.), a sharp point with cliffs on both sides, with the land rising gradually to the S, lies about 0.9 mile NNE of Cliff Point. Peggys Bag, about 0.5 mile S of



Cape Spear Light

Spriggs Point, has a large pinnacle close to but detached from the cliff.

St. John's Harbor (47°34'N., 52°42'W.)

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5.14 St. John's is the capital city and the principal port of the Province of Newfoundland. It is situated mainly on the W shore of the harbor. The harbor is small and has a narrow approach but is convenient and secure with excellent holding ground; well-sheltered by steep hilly land rising to 230m. The harbor, whose limit is a line joining Cahill Point and Chain Rock, is normally open day and night throughout the year. St John's is the center of important sea fisheries used by the vessels of many nations. In addition, there are a number of local manufacturing industries in St. John's. The main exports are fish products, iron ore, paper and pulpwood.

Winds—Weather

Fog is less frequent at St. John's Harbor than farther S. It is stated that although there may be fog in the offing, it is frequently clear inside Cape Spear.

Ice

Pack ice from the N arrives in St. John's Bay from January to the middle of February and is usually from 0.1 to 0.5m thick. The pack ice leaves about April or May. The prevailing E winds in early spring drives the pack ice onto the coast, and this may often block the approaches to St. John's Harbor in February and March. St. John's Harbor is rarely frozen over and in some years no ice is encountered in the harbor. In ordinary seasons, it is seldom closed for as long as 1 week, and the harbor ice disappears about the end of March. At times, even as late as August, icebergs drift into the harbor entrance and more or less block the channels, rendering the passage dangerous.

Tides—Currents

The MHW interval at St. John's Harbor is 7 hours 12 minutes; spring tides rise 1.4m and neap tides rise 0.9m. It is reported that the currents are negligible in St. John's Harbor.

Depths—Limitations

St. John's is entered between South Head and North Head; about 305m apart. The Narrows, with a least depth of 11.8m on the leading lights, leads for about 0.5 mile into the harbor. A vessel of any size, with a maximum draft of 10.7m, can enter and berth in the harbor. The entrance channel is, however, particularly narrow, having a width of 91m. The berthing accommodations in St. John's extend nearly all around the harbor. Reference may be made to the tables. Berth 4 is the dangerous cargo berth.

St. John's Public Berths		
Berth	Length	Depth
1	175m	1.6-5.9m
2	165m	5.9-8.2m
3	180m	8.1-9.0m
4	120m	7.3-8.2m
5	160m	7.3-8.6m
6	150m	3.7-5.4m
7	120m	6.4-7.0m
8	150m	7.9-8.2m
9	150m	7.3-7.5m
10	150m	8.8-9.1m
11	150m	7.9-9.4m
17	180m	8.1-10.3m
18	76m	15.3-16.9m
19	115m	6.7-8.9m
20	162m	6.8-10.4m
21	58m	7.3-9.8m

St. John's Private Berths		
Berth	Length	Depth
12 (Harvey No. 1)	114m	8.0-9.0m
14 (Harvey No. 2)	182m	6.0-7.9m
15 (Harvey No. 3)	88m	7.6m
16 (Harvey No. 4)	145m	7.7-9.8m
22 (Mobil Oil)	153m	7.2-9.6m
23 (Imperial Oil)	145m	8.1-9.1m
24 (Irving Oil)	69m	9.2-9.7m
25 (Marine Institute)	137m	4.9-7.3m
26 (Defence)	61m	5.0-8.2m
27 (Dept. of Fisheries)	153m	4.8-6.7m
28 (Ultramar)	69m	5.8-6.4m
29 (Ultramar)	114m	5.1-6.9m
30 (Coast Guard)	99m	4.4-7.5m
31 (Coast Guard)	183m	6.5-7.6m
34 (Newfoundland Dockyard)	86m	4.4-5.9m
35 (Newfoundland Dockyard)	142m	6.2-6.9m
36 (Newfoundland Dockyard)	95m	5.6-6.7m
37 (Newfoundland Dockyard)	114m	4.4-7.4m

Aspect

Signal Hill, which rises to an elevation of 152m, is 0.3 mile NNW of North Head. Cabot Tower, conspicuous from seaward, stands on Signal Hill. It was at this tower that Marconi heard the first radio signal across the Atlantic in 1901.

Crows Nest, a conspicuous 120m summit, rises on the N side of The Narrows, about 0.3 mile W of Cabot Tower.

The most conspicuous objects in the town are the Roman Catholic Cathedral, with twin towers, standing on the summit of a ridge; the tank of a tobacco factory standing about 325m NE of the cathedral; and the Newfoundland Hotel standing about 0.5 mile NE of the cathedral. Other conspicuous features are The Kirk, with its green spires, standing close S of the Roman Catholic Cathedral, and St. Patrick's Church, a green spire at the SW end of the harbor.

St. John's Harbor leading lights, in line bearing 276°07', lead through The Narrows. The rear light of the entrance range lights is shown from the tower of the Presbyterian Church. This church tower has a short gray blunt spire, with a daymark similar to that of the front light.

Pilotage

Pilotage is compulsory for merchant vessels navigating within the pilotage district, which comprises the port as well as all of the area 2 miles seaward of a line of bearing between South Head and North Head.

Pilots should be requested from the Atlantic Pilotage Authority 12 hours prior to arrival. Confirm or amend the time



Courtesy of USCGC Healy
Approach to St. John's Harbor—The Narrows, distant 1 mile



Courtesy of St. John's Port Authority
St. John's—Cabot Tower on Signal Hill



Courtesy of St. John's Port Authority
St. John's—The Narrows

of arrival 1 hour in advance. The pilots at St. John's also provide coastal pilotage if required.



Courtesy of USCGC Healy

Approach to St. John's Harbor—Inner end of The Narrows



Courtesy of USCGC Healy

St. John's Harbor—South Head Light and Fort Amherst



Courtesy of USCGC Healy

St. John's Harbor—Outer end of The Narrows



Courtesy of USCGC Healy

St. John's Harbor—South Head Light and Fort Amherst

The pilot office is situated at King's Wharf.
Pilots board vessels about 2 miles from the harbor entrance.

Regulations

St. John's is a Canadian National Harbors Board port and a copy of the board's regulations, can be obtained in St. John's.

Vessels with a draft of more than 9.9m should contact the harbormaster.

Engines may only be immobilized with permission of the harbor authority.

A Vessel Traffic Management and Information System, which is mandatory, is in effect in the approaches to St. John's Harbor between lines bearing 090° from Cape St. Francis Light (47°48'N., 52°47'W.) and Bull Head Light (47°19'N., 52°45'W.). This is to enable ships to make their presence known, exchange information as to their positions and intentions, and so contribute to safety in the area.



Courtesy of St. John's Port Authority

St. John's Harbor from W



Courtesy of St. John's Port Authority

St. John's Harbor from W

The system can be contacted on VHF channel 11 using call sign "St. John's Traffic."

Reporting points may best be seen on the chart.

Traffic movements may be restricted when the following vessels are underway:

1. A vessel carrying dangerous cargo.
2. A vessel considered to be navigating with difficulty.

Anchorage

Anchorage can be obtained in St. John's Harbor as directed by the harbormaster, in depths of 15 to 19m, mud and silt.

Anchorage is prohibited near two sewer outfalls on the S side of The Narrows, near Anchor Point. The outfalls are marked by notice boards.

Directions

Cliff Point (47°32'N., 52°39'W.), in line bearing 262° with Black Head, leads N of the dangers off Cape Spear. Both points have been previously described in [paragraph 5.13](#).

The conspicuous Roman Catholic Cathedral at St. John's, bearing 278°, and open N of the S side of the entrance channel to St. John's Harbor, leads N of **Vestal Rock** (47°34'N., 52°41'W.).

Caution

Merlin Rock (47°34'N., 52°41'W.), with a least depth of 9.4m, lies at the W end of The Narrows.

St. John's Harbor to Cape St. Francis

5.15 Cuckhold Head (47°35'N., 52°40'W.), the N part of which forms the S entrance point of Quidi Vidi Harbor, lies about 0.9 mile NNE of North Head. It is a conspicuous headland, 125m high, and appears conical from seaward.

Quidi Vidi Harbor, entered N of Cuckhold Head, has a least depth of 0.8m in the entrance and is suitable for small boats only. In reduced visibility, care must be taken not to mistake the entrance to the harbor for the entrance to St. John's Harbor. A slipway is located at Quidi Vidi.



Quidi Vidi Harbor



Quidi Vidi Harbor Entrance looking seaward

Small Point (47°36'N., 52°39'W.), 1.2 miles NNE of Quidi Vidi Harbor, is rounded and 95m high. About 1 mile SSW of Small Point there is a very conspicuous cliff, 148m high, at the foot of which is a large cave known as Bawdens Hole. Three radio towers, 235m high and each marked by a fixed red obstruction light, stand about 0.8 mile W of Small Point.

Sugarloaf Head (47°37'N., 52°39'W.) is very conspicuous with a sheer cliff face. Viewed from the NNE, it has the appearance of a wedge. From the ENE and SSE, it appears as a cone-shaped hill.

Devils Point, about 0.5 mile NW of Sugarloaf Head, has an elevation of 79m and its summit is marked by a beacon of stones.

The coast between Sugarloaf Head and Devils Point is very rugged and has several caves.

Flagstaff Hill rises close to the coast, about 1.5 miles NW of Sugarloaf Head; there is a conspicuous yellow patch just N of the summit and a conspicuous dome on the summit.

Redcliff Head, about 2 miles NNW of Sugarloaf Head, is formed of bold, steep, reddish cliffs. There is a deep gulch on both its N and S sides; one or the other, depending on the light, is usually seen as a black band down the sides of the cliffs.

Tor Bay is entered between **Torbay Point** (47°40'N., 52°40'W.) and Flat Rock Point, about 2.8 miles NNW. Tantam Shoals extend about 0.8 mile NNE of Torbay Point. Depths of 6.4m exist about 0.3 mile from shore, while 12.8m depths exist near the NNE end of the shoals. A church is prominent at the head of the bay.

Anchorage can be obtained in Torbay Bight, in 21.9m, S of a small beach on the NW side of the bight; it is exposed to the NE.

Flat Rock Cove is entered between Flat Rock Point and Red Head, about 0.8 mile NNW. A red church with a steeple, the top of which has an elevation of 87m, stands on the W shore of

the cove. The church is conspicuous, except from the SE, when it is obscured by Flat Rock Point.

5.16 Red Head (47°43'N., 52°42'W.), about 0.8 mile NNW of Flat Rock Point, is deep red in color and very conspicuous. It is 83m high. Three radio towers, 51m high, lie about 1.8 miles NW of Red Head.

Pouch Cove is a small, open cove. Biscayne Bay is a small cove located less than 0.5 mile S of Cape St. Francis. Pigeon Island, 33m high, lies in the entrance to the bay. Four islets lie about 0.4 mile E of Pigeon Island.

The Brandies are a group of rocks, the highest of which dries 0.6m, lying about 0.5 mile ENE of Cape St. Francis.

Cape St. Francis (47°49'N., 52°47'W.), consisting of two low hills, is the E entrance point of Conception Bay. Close N of the W hill there are two small islets. The point is marked by a light which stands on the E hill. The light is exhibited from a low octagonal aluminium tower on top of a white flat-roofed square building. The tower is reported to be difficult to see during daylight.